

POVALYAYEV, M.I., kand. tekhn. nauk; VORONIN, A.M., inzh.

Rules for the arrangement of mastic roofs reinforced by glass materials.  
Prom. stroi. 43 no.9:13-16 '65. (MIRA 18:9)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy  
institut promyshlennyykh zdaniy i sooruzheniy.

ACCESSION NR: AP5016399

TH/0100/45/100/C/0/C220/0222

621.374-12

AUTHOR: Batalin, S. S.; Voronin, A. M.

TITLE: Digit printing for dekatron scalers

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1965, p20-22

TOPIC TAGS: digit printer, scalers

ABSTRACT: A system of delivering information from a dekatron scaler to a "Rhein-Metal" typewriter is briefly described. The total timing interval depends on the number of decades and is about 4 sec for the Soviet-made 9-20 scaler. A block diagram and a principal circuit diagram are explained. The digit printing system can also operate from a number of scalers. Orig. art. has: 2 figures.

ASSOCIATION: Institut yadernoy fiziki AN KazSSR, Almaty-60 (Institute of Nuclear Physics, AN KazSSR)

SUBMITTED: 24Mar64

TYPE: 00

SPR. DOCUMENT: 02, 00

NO REF Sov: 000

OTHER: 000

Card 1/1

VORONIN, A.N., inzh. (Kiyev)

Use of a speed-voltage generator for performing division operations in automatic control systems. Elektrichestvo no.11:  
32-35 N '65. (MIRA 18:11)

TOP(S) NM/BC

ACCESSION NR. AP4002697

AUTHOR: Voronin, A. N. (Kiev)

TITLE: Using disturbance signals in high-speed automatic systems

SOURCE: AN SSSR. Izvestiya. Tekhnicheskayi Kibernetika, No. 6, 1964, 154-157

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory.

ABSTRACT: The effect of principal disturbances on the optimality of transient processes in high-speed automatic-control systems (ACS) is theoretically investigated. Compensation of such disturbances as a method for enhancing the ACS speed is considered. It is found that: (1) A high-speed ACS having no disturbance link in its structure cannot ensure the optimal transient process when disturbances occur; (2) If the ACS constraints depend upon disturbances, the characteristic of the nonlinear converter involved should be made dependent on

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L 29545-65

ACCESSION NR: AP5002692

the same disturbances in order to ensure that the ACS operation obeys the optimal law within the entire range of the disturbances; (3) If the plant has a proportional characteristic with respect to the principal disturbances, the ACS must ensure two loops - one of them ensuring the invariance of the controlled coordinate to steady-state disturbances and the other taking care of error signals in a time-optimum (or near-optimum) way; no integrating part is included in ACS, and no conditions for causing regulator cycling are assumed to be present.

Orig. art. has: 2 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 07Oct63

ENCLIA: 00

500 COPIES: 1E

NO REP GOVT: 004

OPTIONAL: 002

Card 2/2

ACCESSION NR: AP4025740

8/0144/64/000/002/0217/0227

AUTHOR: Voronin, Al'bert Nikolayevich (Aspirant)

TITLE: Calculating the settings of a quick-acting speed-limited and torque-limited servo system

SOURCE: IVUZ. Elektromekhanika, no. 2, 1964, 217-227.

TOPIC TAGS: automatic control, servo, quick acting automatic control, speed limited servo, torque limited servo

ABSTRACT: An electromechanical continuous power servo is theoretically investigated; it is proven that the characteristics of the nonlinear components improving the dynamic properties of such a servo should be selected with a proper allowance for some parameters of the servo. The motion of the servo in the phase plane is investigated. Formulas are developed for calculating the amplifier gain and the coefficient of a nonlinear feedback. The effect of the

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ACCESSION NR: AF4025740

initial error on the optimality of transient processes is studied. These conclusions are offered: (1) To ensure the transient process in a quick-acting servo system having a finite gain approaching its optimum as close as possible, the coefficient of a nonlinear feedback should be determined as a function (formula supplied) of the gain; (2) With specified finite system parameters, in working out the initial error, the closer the transient process is to its optimum, the higher is the initial error; a value of the initial error exists which causes the system to operate at its maximum dynamic torque. Orig. art. has: 5 figures and 45 formulas.

ASSOCIATION: none

SUBMITTED: 28Nov63

SUB CODE: DP, LE

DATE ACQ: 16Apr64

NO REF Sov: 002

ENCL: 00

OTHER: 001

Card 2/2

VORONIN, A. N. et al

"Radioisotope fueled thermoelectric generators."

report presented at the 3rd Intl Conf on Peaceful Uses of Atomic Energy, Geneva,  
31 Aug-9 Sep 64.

VORONIN, A.N. [Voronin, A.M.] (Kiyev)

Effect of a load on the dynamic characteristics of a servo system  
optimum in respect to response time. Avtomatyka 8 no.5:13-19 '63.  
(MIRA 17:1)

VORONIN, A.N., inzh.

Conditions of static invariancy in regulating the voltage  
of a generator. Izv. vys. ucheb. zav.; energ. 7 no.2:85-88  
F '64. (MIRA 17:3)

1. Institut avtomatiki Gosplana UkrSSR. Predstavlena latora-  
toriyey teorii informatsii i upravleniya.

KALMYKOV, M.R.; VORONIN, A.N.

Device for glazing ceramic pipes. Stek. i ker. 18 no.12:31-32  
D '61. (MIRA 16:8)

1. Rechitskiy zavod keramicheskikh trub.  
(Pipe, Clay)

VORONIN, A.N., inzh.

Nearly optimal voltage regulation of a generator. Izv. vys. ucheb.  
zav.; energ. 7 no.5:14-19 My '64. (MIRA 17:7)

1. Institut avtomatičeskogo Gosplana UkrSSR.

VORONIN, A.N., inzh.; DOLETSKIY, S.P., inzh.

E-1584 excavator for finishing earthwork and planning. Strel  
i dor. mash. 8 no.12:1-2 D'63 (MIRA 17:7)

N.

Thermoelectric Generator TUR-3—V. Dzhel' Peš,  
A. Voronin & N. Reznikaya. (Radio, Moscow, Eng.  
1951, No. 2, pp. 24-29) Description of a paraffin-lamp-  
driven generator for use with battery-type receivers.  
The outputs are: 2 V, 2 A for the vibrator h.t. unit and  
2 V, 0.5 A for heaters. A 1.2 V, 0.30-A tapping is also  
provided. Semiconductor-type thermocouples are  
mentioned as being more efficient than pure-metal  
thermocouples.

P.

VORONIN, Anatoliy Nikolayevich, inzh.; IOPPE, A.P., akademik, red.;  
SOMINSKIY, M.S., kand. fiz.-mat. nauk, red.; MASLAKOVITS, Yu.P.,  
doktor fiz.-mat.nauk; red.; SMOLENSKIY, G.A., doktor fiz.-mat.nauk,  
red.; SHALYT, S.S., doktor fiz.-mat.nauk, red.; KUGEL', A.R., kandi.  
fiz.-mat.nauk; SUBASHIYEV, V.K., kand.fiz.-mat.nauk, red.; SHAGURIN,  
K.A., inzh.red.; AGHGINADZE, Sh.D., inzh.; FREGER, D.P., tekhn.red.

[Semiconductor thermoelectric generators] Poluprovodnikovye termo-  
elektrogeneratorы, Leningrad, Leningr. dom nauchno-tekhn.propagandy,  
1957. 43 p. (Poluprovodniki, no.13) (MIRA 11:3)  
(Semiconductors) (Electric generators)

VORONIN, A.N.; SHER, E.M.; SHCHERBINA, A.G.

Precision semiconductor zero thermostat. Prib. i tekhn. eksp.  
6 no.4:181-182 Jl-Ag '61. (MIRA 14:9)

1. Institut poluprovodnikov AN SSSR.  
(Thermostat)

ACCESSION NR: AT3007806

S/2959/63/000/000/0117/0122

AUTHOR: Voronin, A. N.; Grinberg, R. Z.

**TITLE:** Briquetting of thermocouple electrodes of  $\text{Bi}_2\text{Te}_3-\text{Sb}_2\text{Te}_3$  and  $\text{Bi}_2\text{Te}_3-\text{Bi}_2\text{Se}_3$  alloys, with subsequent heat treatment.

SOURCE: Termoelektricheskiye svoystva poluprovodnikov; sbornik trudov I i II soveshchaniya po termoelektrichestvu. Moscow, 1963, 117-122.

TOPIC TAGS: thermocouple, thermocouple electrode, thermocouple alloy, thermocouple electrode alloy, thermocouple heat treatment, Bi sub 2 Te sub 3 Sb sub 2 Te sub 3 alloy, Bi sub 2 Te sub 3 Bi sub 2 Se sub 3 alloy

**ABSTRACT:** A new powder technology has been developed for thermo-couple manufacture by a method of cold pressing and subsequent heat treatment. The relationships between grain size, pressure, heat-treatment temperature and duration, and the resulting thermoelectric properties of the electrodes were established. The starting materials were: TsMTU-3098-52 Bi, TsMTU-42-11 Class I sublimated Te, SU-0 Sb,

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and Reactive-brand Se. For the positive alloy, 3% Te and 0.1% Pb were added, and for the negative, 0.5% Bi and 0.06% Cu. Grain size of the alloy powder ranged from 0.1 to 3 mm. The duration of heat treatment varied from 3 to 48 hours and the pressure, from 1 to 10 ton/cm<sup>2</sup>. The maximum power coefficient for positive electrodes was obtained at 8-9 ton/cm<sup>2</sup>, with subsequent tempering at 385°C for 8 hr, and with a grain size of 0.25 mm or less. The maximum power coefficient generally corresponded to the maximum density of a specimen. The power coefficient increased with temperature up to 400°C, after which the specimens deformed, and with the duration of tempering up to 350°C; at 390°C the prolongation of heat treatment had little effect. A grain-size decrease effects an increase in the thermal coefficient and a decrease in electroconductivity and lattice thermal conductivity. For negative electrodes, the optimal pressure remains at 8-9 ton/cm<sup>2</sup> (for specimens with grain size less than 0.25 mm sintered for 8 hr at 530°C. With an increase in the tempering temperature of the negative electrode, the electroconductivity and power coefficient increase and the thermal coefficient decreases. The effectiveness of the alloy changes only slightly at

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ACCESSION NR: AT3007806

400--500C; at higher temperatures deformation sets in. Optimum stability of the  $\text{Bi}_2\text{Te}_3$ - $\text{Bi}_2\text{Se}_3$  alloy was obtained with tempering at 510--530C. The grain-size effect is similar for positive and negative electrodes. Thermocouples composed of electrodes with optimal characteristics had an effectiveness of  $1.92 \times 10^{-3}$ /degree or, for specimens having an almost monocrystalline structure,  $2.06 \times 10^3$ /degree. The average mechanical strength of the cold-pressed specimens was  $4.98 \text{ kg/cm}^2$ , and that of the hot-pressed specimens,  $4.46 \text{ kg/cm}^2$ . Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 160ct63

ENCL: 00

SUB CODE: PH

NO REF Sov: 004

OTHER: 000

Card 3/3

VORONIN, A.N. (Kiyev)

*Use of disturbance signals in high-speed automatic control systems.*  
Izv. AN SSSR. Tekh. kib. no.6:154-157 N-D '64.

(MIRA 18:3)

L 12805 65 EMT(d) P0-4/P9-1/P10-4/PK14/P1-4 TJP(c)/15(1)-5/13/13; C(a)/  
ASD(d)/AFMDC/AFCLR/AFIC(p)/RME(l)/ECE(p)/EC

ACCESSION NR: AP1045823 3/01/95/64/000/009/041/0046

AUTHOR: Voronin A. N. (Kiev)

TITLE: Second-derivative signal used for optimizing transient processes in  
high-speed servosystems.

SOURCE: Elektricheskva, no. 9, 1964, 41-46

TOPIC TAGS: automatic control, automatic control design, automatic control  
system, automatic control theory, servosystem, high speed servosystem

ABSTRACT: The use of a signal proportional to the error second derivative for  
optimizing transient processes under fluctuating load conditions without direct  
measurement of disturbing factors, is investigated. A high speed power servo  
system (see Enclosure 1), whose actuator is an excavator-type mechanism,  
characteristics, is analyzed. Although the physical system is rate- and  
acceleration-constrained, the analysis taken only the second derivative into

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L-13805-65  
ACCESSION NR: AF4045823

account. A random-fluctuating dry-friction load moment is considered. For optimization purposes, the number of high-derivative signals and their weights are determined from statistical characteristics of the load, which makes the problem determinate. In the widespread practical case, when the average rate of fluctuation of the load moment is so much lower than the speed of error-induced operation that this moment can be considered constant during the system's deceleration time, the transient-process optimization can be realized by means of the acceleration signal only. Orig. art. has 5 figures and 26 formulas.

ASSOCIATION: none

SUBMITTED: 25 May 64

SUB CODE: DP, IE

NO REF Sov: 006

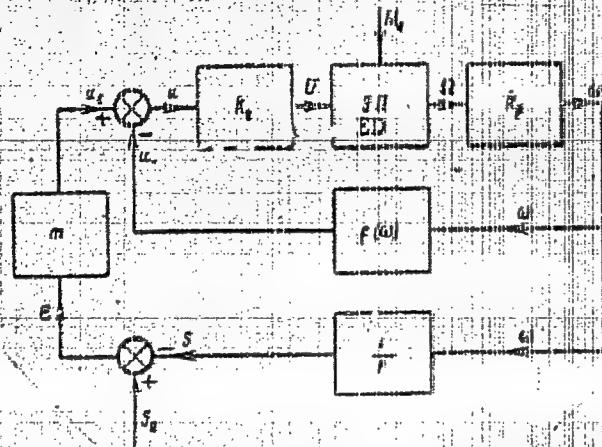
ENCL: 01

OTHER: 002

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I 13805-65

ACCESSION NR: AP4045623



A functional diagram of the high-speed power servosystem.

- SIGNS**
- p - present position of the driven axle
  - p<sub>0</sub> - position of the reference axle
  - e - error
  - U<sub>f</sub> - feedback signal
  - U<sub>c</sub> - control signal
  - U<sub>m</sub> - motor armature voltage
  - M<sub>d</sub> - load moment
  - Omega - drive axle speed
  - K<sub>f</sub> - transfer factor of the measuring unit of the principal loop
  - E - amplifier gain
  - E<sub>b</sub> - electric torque
  - K<sub>r</sub> - reduction ratio
  - f(omega) - function generator of f(omega) - M<sub>d</sub>/U<sub>m</sub>

Card 3/3

VORONIN, Al'bert Nikolayevich, aspirant

Calculation of the setting of a high-speed servo system with  
moment and speed limitations. Izv. vys. ucheb. zav.; elekromekh.  
7 no.2:217-227 '64. (MIRA 17:4)

VORONIN, A.N. [Voromin, A.M.] (Kiyev); TSIPTSYURA, R.D. [TSyptsiura,  
R.D.] (Kiyev)

Composite system for automatic frequency and active power  
control using as a compounding signal a load determined by  
a chart of maximally economical powers. Avtomatyka 9  
no. 5:83-85 '64.

(MIRA 18:2)

VORONIN, A.P.; NIZHEGORODOW, V.M., dotsent; KALININ, I.T., assistant

Conditions of storage, transport and use of poisonous chemicals.  
Zdrev. Bel. 9 no.7:55-56 Jl'63 (MIRA 17:4)

1. Iz kafedry obozreniy gigiyeny ( zav. - dotsent V.M.Nizhegorodow) Grodzenskogo meditsinskogo instituta.

VORONIN, A.P.

Change in the design of the spur rack bushing of the pressure  
shaft band in E-1004 excavators. Rats. i izobr.predl. v stroi.  
no.79:26-27 '54. (MIRA 8:4)  
(Excavating machinery)

11-34522-65  
ACCESSION NO.: AP501794

AUTHOR: Veronin, A. P.

#### **FIGURE: Patterns in the blood of experimentally infected cattle with focus of cycloheximine**

SOURCE: Giriyan i Binitariya, no. 9, 1915, 306

**TOPIC TAGS:** participant agency, technology, biological ecology, blood

**Abstract:** Rats and rabbits were poisoned with cyclohexanone fumig. (1 mg./for 6 - 6½ hours a day for almost 4 months); the author fitted definite shifts in the clinical blood indexes. All the rats (except one) showed a rise in erythrocytes; the rabbits showed greater variations than control animals in the number of erythrocytes. At the end of the poisoning period some rabbits showed a decrease in hemoglobin and a tendency to a decline in the color index. Temporary leukocytosis was observed in some rabbits in the middle of the treatment. In all the rats and some rabbits the number of leukocytes had decreased more than in the control animals by the end of the treatment. All the rats showed a shift to the left of the leukocyte formula, and eosinophilia. The author recommends their blood indexes be included in clinical examinations of persons who work in the presence of cyclohexanone fumes.

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L 51522-65

ACCESSION NR: AP5017994

ASSOCIATION: Grodno City government's industrial health Institute (Grodno State Medical Institute); Ieninogradsky machine-tool factory's Institute of Hygiene  
truda i profzabolevaniy. Ministerstvo zdravookhraneniya RFSR (Leningrad Scientific Research Institute for Industrial Hygiene and Preventive Medicine, Ministry of Health, RSFSR)

SUBMITTED: 00

NO REF Sov: 000

ENCL: 00

OPNR: CMC

STN 000001

J/BS

Card 2/2

VORONIN, A. P.

AID P 2467

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 14/18

Authors : Voronin, A. P., Graduate Research Student, Sokolova, L.A.,  
Industrial Sanitary Inspector

Title : Some defects of standard designs of repair shops in  
machine and tractor stations

Periodical : Gig. i san., 6, 55-58, Je 1955

Abstract : Describes the defects of repair shops built in the  
Yaroslavl' Province in 1949-1953, and gives recom-  
mendations for their reconstruction, as well as for the  
present standard design No. 1662. Considers the standard  
designs of machine and tractor stations and their repair  
shops unsatisfactory from the point of view of hygiene.  
Table.

Institution: None

Submitted : Dec. 13, 1954

*Candi*  
VORONIN, A. P.: Master Med Sci (diss) -- "Material on the toxicology of cyclohexanone". Leningrad, 1958. 12 pp (Min Health RSFSR, Leningrad Sanitary-Hygiene Med Inst), 200 copies (KL, No 4, 1959, 130)

ALEKSEYEVA, Revmira Valentinovna, kand. ekon. nauk; VORONIN, Andrey  
Pavlovich, kand. ekon. nauk; ZAVERNYAYEVA, L.V., red.;  
GERASIMOVA, Ye.S., tekhn. red.

[Accumulation and development of collective farm property]  
Nakoplenie i razvitiye kolkhoznoi sobstvennosti. Moskva,  
Izd.-vo ekon. lit-ry, 1963. 247 p. (MIRA 16:1C)  
(Collective farms—Finance)

S/120/61/000/004/032/034  
E194/E555

AUTHORS: Voronin, A.N., Sher, E.M. and Shcherbina, A.G.

TITLE: A precision semiconductor zero-thermostat

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1961,  
pp. 181 - 182

TEXT: Maintaining the cold junctions of thermocouples in a vacuum flask with melting ice is an inconvenient and rather inaccurate arrangement. A cold-junction thermostat has been constructed, based on semiconductor cooling thermo-elements, which accurately maintains a temperature of 0 °C. The cold junction of the thermocouple is in a sealed copper vessel, completely filled with water and also containing a pressure bellows inside which are electrical contacts that operate when the bellows are compressed. The base of the copper vessel is cooled by being in contact with the cold junctions of a battery of 8 semiconductor thermo-elements connected in series and passing a current of 16 A. The hot junction is cooled by tap water and the water unions also serve as electrical terminals. As the water in the copper

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S/120/61/000/004/032/034  
E194/E355

A precision ....

vessel is cooled it freezes round the walls; expanding so that the pressure-sensitive bellows is compressed to operate a relay that disconnects supply from the thermal battery. As the ice melts the pressure is relieved and supply to the thermo-battery is restored. Thus, the cold junction is always in water that is in equilibrium with ice.

Foam plastic is used for thermal insulation of the equipment. The thermostat maintains a temperature of 0 °C to within ± 0.001 °C. The thermostat is 100 mm in diameter, 120 mm high and weighs 1.1 kg. It is supplied by a rectifier unit using two germanium diodes type BF-10 (VG-10) and can operate with cooling-water temperature up to 30 °C and room temperatures up to 40 °C. By increasing the size, water cooling could be replaced by natural cooling. There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR (Institute of Semiconductors of the AS USSR)

SUBMITTED: December 15, 1960

Card 2/2

NESTEROV, Mikhail Aleksandrovich; SMIRNOV, Andrey Aleksandrovich;  
VORONIN, A.S., red.

[Interbranch standardization of founding equipment and  
tools] Mezhotraslevaia normalizatsiya liteinoi osnastki i  
instrumenta. Moskva, Izd-vo Standartov, 1965. 131 p.  
(MIRA 18:10)

AFONIN, K.B.; BURTSEV, K.I.; BYSTROV, S.N.; VIMETS, G.B.; VODNEV, G.G.; VORONIN,  
A.S.; GEVLICH, A.S.; GRYAZHOV, N.S.; GUDIM, A.F.; GUSTATIESKIY, M.A.;  
DVORIN, S.S.; DIBEZHKO, V.Ye.; DMITRIYEV, M.M.; DOBDE, M.M.; DOROGOBID,  
G.M.; ZHDANOV, G.I.; ZAGORUL'KO, A.I.; ZELMAETSKIY, A.G.; IVASHCHENKO,  
Ya.N.; KAFTAN, S.I.; KVASHA, A.S.; KIRBYEV, A.D.; KLISHEVSKIY, G.S.;  
KOZYREV, V.P.; KOLOBOV, V.N.; LGALOV, K.I.; IMYAS, V.A.; LERNER, B.Z.;  
LOBODA, N.B.; LUBINETS, I.A.; MANDRYKIN, I.I.; MUSTAFIN, F.A.; NEMIROVSKIY,  
N.Kh.; NEFEDOV, V.A.; OBUKHOVSKIY, Ya.M.; PRITSIV, M.A.; PETROV, I.D.;  
PODOROZHANSKIY, M.O.; POPOV, A.P.; RAK, A.I.; RUVYAKIN, A.A.; ROZHKOV,  
A.P.; ROZENGAUZ, D.A.; SAZONOV, S.A.; SIGALOV, M.B.; STOMAKHIN, Ya.B.;  
TARASOV, S.A.; FILIPPOV, B.S.; FRIMAN, N.K.; FRISHBERG, V.D.; KHAR'KOV-  
SKIY, K.V.; KHOLOPTSEV, V.P.; TSARKOV, M.N.; TSOGLIIN, M.E.; CHERNYY, I.I.  
CHERTOK, V.T.; SHILKOV, A.K.

Samuil Berishevich Bamme. Keks i khim.na.6:64 '56. (MLRA 9:10)  
(Bamme, Samuil Berishevich, 1910-1956)

BORISOV, Nikolay Ivanovich; SMOLIN, V.N., nauchn. red.; VORONIN,  
A.S., red.

[Standardization of the parameters of motor vehicles]  
Standartizatsiya parametrov avtomobilei. Moskva, Izd-vo  
Standartov, 1965. 179 p. (MIRA 18:8)

VVERCHEN, //.

AUTHOR: Sergeyev, A. S., Docent 105-58-4-31/37  
TITLE: Dissertations (Dissertatsii)  
PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 90 - 91 (USSR)  
ABSTRACT: For the Degree of a Candidate of Technical Sciences,  
1946-1953.  
At the All Union Scientific Research Institute for Railroad  
Traffic Engineers(Vsesoyuznyy nauchno-issledovatel'skiy in-  
stitut inzhenerov zheleznodorozhnogo transporta).  
M. D. Treivas, on March 22, 1946: " Selection of Filtering  
Devices for Train Undercarriages With Non-Controlled and  
Controlled Mercury-Arc Rectifiers". Official opponents were:  
Doctor of Technical Sciences Professor G. V. Dobrovolskiy  
and Engineer S. M. Serdinov.  
A. V. Voronin, on June 21, 1946: " Current Distribution Between  
the Longitudinal Lines of the Contact Network and the Cal-  
culation of the Heat Development of the Network-Elements".  
Official opponents were: Doctor of Technical Sciences K. M.  
Markvardt and Doctor of Technical Sciences Professor D. M.  
Minov.

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Dissertations

105-58-4-31/37

I. I. Vlasov, on February 21, 1947: "Some Problems on the Wear of Contact Lines for Electrified Railroads". Official opponents were: Doctor of Technical Sciences Professor K. G. Markvardt and Engineer S. M. Serdinov.

I. A. Korchagin, on June 27, 1947: "Start of the Production and the Investigation of Selenium Rectifiers for the Supply Devices of the Signalization-Centralization Blocking". Official opponents were: Doctor of Technical Sciences Professor M. I. Vakhnin and Candidate of Technical Sciences S. B. Yuditskiy.

A. V. Posse, on October 17, 1947: "Monophase D.C. Ignitron Transformer for Main-Line Electric Locomotives". Official opponents were: Doctor of Technical Sciences Professor G.I. Babat and Candidate of Technical Sciences M. A. Chernyshev.

R. I. Miroshnichenko, on June 30, 1950: "Development of the Method for the Calculation of Smoothing Devices for Rectifier Substations". Official opponents were: Doctor of Technical Sciences Professor M. I. Mikhaylov and Engineer S. M. Serdinov.

I. I. Rykov, on March 2, 1951: "Atmospheric Excess Voltages in Traction Equipment of D.C.-Railroads". Official opponents

Card 2/4

Dissertations

105-58-4-31/37

were: Doctor of Technical Sciences Professor V. V. Burzsdorf and Engineer V. I. Tromifov.  
B. Ye. Geronimus, on May 25, 1951: "Selection and Maintenance of External Optimum Characteristics for Mercury-Arc Rectifier Train Substations of Mainline Railroads". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Engineer L. M. Pertsovskiy.

V. D. Radchenko, on December 14, 1951: "Protection of D.C. Electro-Locomotives Against Atmospheric Excess Voltages". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences D. V. Razevig.

Ye. P. Ivanov, on December 28, 1951: "Determination of Excess Recuperation Energy in Electrified Railroads". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences M. Ye. Krest'yanov.

Yu. L. Kartvelishvili, on January 16, 1952: "Investigation of the Operation of Train Electromotors in Diesel Locomotives in an Operation With Weakened Field". Official opponents were: Doctor of Technical Sciences Professor Ye. V. Nitusov and Doctor of Technical Sciences A. S. Dimitradze.

Card 3/4

Dissertations

105-58-4-31/37

S. M. Domanitskiy, on March 13, 1953: " Excitation Automation in Train Generators in Diesel Locomotives When Using Magnetic Amplifiers". Official opponents were: Doctor of Technical Sciences Professor Ye. V. Nitusov and Candidate of Technical Sciences Docent A. D. Stepanov.

V. S. Khvostov, on December 25, 1953: " Magnetic Calculations and Construction of the Collector Potential Curves in D.C. Traction Motors". Official opponents were: Doctor of Technical Sciences N. V. Gorokhov and Candidate of Technical Sciences Docent P. N. Shlyakhto.

AVAILABLE: Library of Congress

1. Electrical engineering-Reports

Card 4/4

VORONIN, A.

Experiences with electric traction using alternating current of industrial frequency.  
Tr. from the Russian.

p. 277 (Zeleznicni Technika. Vol. 5, no. 11, Nov. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,  
February 1958

VORONIN. A.V.

VORONIN, A.V., kandidat tekhnicheskikh nauk

Investigation of wire heating in contact systems and their thermal  
calculation. Tekh.zhel.dor. 6 no.7:11-14 J1'47. (MLRA 8:11)  
(Electric railroads--Wires and wiring)

VORONIN, A.V., kandidat tekhnicheskikh nauk

Development of electric traction during the 30 years of Soviet  
power. Tekh. zhel.dor. 6 no.11:15-19 N°47. (MIRA 8:12)  
(Electric railroads)

VORONIN, A. V.

USSR (600)

Electric Railroads - Wires and Wiring

Contact network with flexible hanger suspension, and relevant calculations.  
Trudy TSNII MPS No. 7, 1947.

9. Monthly List of Russian Accessions, Library of Congress, October 1958, Uncl. 2

VORONIN,A., kandidat tekhnicheskikh nauk; SOKOLOV,N.; RYAZANTSEV,B.

Against conservatism in introducing new signal, central control,  
block system and new communication techniques. Zhel.dor.transp.  
no.10:47-55 0'47. (MLRA 8:12)

1. Direktor-polkovnik svyazi (for Voronin) 2. Glavnyy inzhener  
TSentral'nogo Upravleniya mashinostroitel'nykh zavodov Ministerstva  
putey soobshcheniya, general-direktor tyagi 3-go ranga (for Sokolov)  
3. Zam.nachal'nika Glavnogo upravleniya signalizatsii i svyaz Mi-  
nisterstva putey soobshcheniya, direktor-polkovnik svyazi (for Ryazan-  
tsev)

(Railroads--Signaling)

VORONIN, A. V. and BISLOUGH, L. A.

"An Investigation of the Heat Emitted From the Surface of Contact System Conductors," The Works of the Scientific-Research Institute of Railroad Transportation (Trudy vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznyodorozhnogo transporta) No 42, Transzheldorizdat, 132 pp, 1951.

w-22517, 29 Apr 52

VISLOUKH, L.A., inzh.; VORONIN, A.V., kand.tekhn. nauk.

Investigating heat emission from surfaces of wires used in contact  
network installations. Trudy TSNII MPS no. 42:80-96 '51.  
(Electric railroads—Wires and wiring)  
(Heat—Radiation and absorption)

(MIRA 11:6)

VORCHIN, A.V., kandidat tekhnicheskikh nauk

Investigation of the performance of electric train equipment.  
Trudy TSNII MPB no. 8833-130 '53. (MIRA 7:7)  
(Electric railroad equipment and supplies)

VORONIN, Aleksey Vladimirovich; KALININ, V.K., redaktor; VERINA, G.P.,  
tekhnicheskiy redaktor

[Power supply for electric railroads] Energosнabzhenie elektricheskikh  
zheleznykh dorog. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 350 p.  
(MLRA 8:3)

[Microfilm]  
(Electric railroads--Substations)

VORONIN A.V.

KHACHATRYAN, A.S.; ABAZHEV, Yu.G.; ZOLOTAREV, T.L.; KONDAKHONIAN, V.S.;  
ATABEKOV, G.I.; GABASHVILI, N.V.; SISOYAN, G.A.; MAKHARADZE, G.K.;  
VORONIN, A.V.; GORTINSKIY, S.M.; KARSAULIDZE, A.N.

Professor A.Ia Ter-Khachaturov, A.S.Khachatrian and others.  
Elektricheatvo no.8:90 Ag '54. (MERA 7:8)  
(Ter-Khachaturov, Artemii IAkovlevich, 1884- )

VORONIN A.V.

VLASOV, I.I.; KALININ, V.K., inzhener, redaktor; IVANOV, I.A., direktor;  
VORONIN, A.V., rukovoditel' otdeleniya elektrifikatsii; YUDSON, D.M.,  
tekhnicheskiy redaktor.

Technique for the mechanical design of contact systems. Trudy TSNII  
(MIRA 7:11)  
MPS no.91:3-82 '54.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznychodorozhno-  
go transportsa MPS (for Ivanov)  
(Electric railroads)

VORONIN, A.V., kandidat tehnicheskikh nauk.

New technology in railroad electrification. Transp. stroi. 6 no.7:  
4-8 Jl '56. (Railroads--Electrification) (MLRA 9:10)

VORONIN, A.V., kand.tekhn.nauk, red.; SIDOROV, N.I., inzh., red.; SHIRYAYEV,  
A.P., inzh., red.; VERINA, G.P., tekhn.red.

[Electric traction for foreign railroads on single-phase current;  
a collection of papers. Translations] Elektricheskaja tsiaga zarubesh-  
nykh zheleznykh dorog na odnofaznom toke; sbornik materialov. Moskva,  
Gos.transp.zhel.dor. izd-vo, 1957. 254 p.  
(MIRA 11:?)  
(Electric railroads)

VORONIN, A.V., kandidat tekhnicheskikh nauk.

Prospects for single-phase traction systems in the U.S.S.R. Elektricheskovo no.2:1-4 F 157. (MLRA 10:3)

1. Institut kompleksnykh transportnykh problem AN SSSR.  
(Railroads--Electrification)

VORONIN, A. V.

Khachaturov, T. S., Voronin, A.V., Denisov P. K. 30-11-10/23

AUTHORS:

TITLE:

Current Problem in Transportation Development  
(Aktual'naya problema razvitiya transporta) On the Electrification of Railroads by Means of Monophase Current (Ob elektrifikatsii zheleznykh dorog na odnofaznom toke promyshlennoy chasty).

PERIODICAL: Vestnik AN SSSR, 1957, Vol. 27, Nr 11, pp. 89 - 94 (USSR)

ABSTRACT:

The author deals with the problem of profitability. In connection with an essentially simplified supply of energy it may be reckoned with a reduction of the costs by 30 - 40%. By the use of alternating current (50 gts) the electric corrosion is also many times reduced; the safety devices necessary in the case of direct-current may also be dropped (see table 1). Besides the own weight of the electrical traction engines (Elok) in connection with the monophase direct current hitherto used can be essentially diminished. Electrical traction engines with monophase direct current (with ion-transformer) permit the use of recuperative braking when the motors work as generators (on lines with a fall) and give off the energy to the electric-supply line. The author among others refers to the investigations (electric traction engines with ion-transformer) carried out in the Rhineland.

Card 1/2

The Development of Transport a Problem of Topical Interest      30-11-10/23  
On the Electrification of Railroads by Means of Monophase Current.

Numberous other problems should also be investigated in parallel with these, the author said, among them the exact technical-economical comparison of the alternating current as traction under the conditions prevailing in the USSR (see table 2). In the directions of the 20th congress of the CPSU a certain aim was set to these intentions. The production in series of main electric traction engines for monophase current began already in 1956. In Leningrad a new institute for electrotechnics was established under the direction of M. P. Kostenko, Member of the railroads within the frame work of transport became of principal importance. Besides the change-over to alternating current should at once be carried out, in order to avoid later additional costs. There are 2 tables.

AVAILABLE: Library of Congress

Card 2/2

VORONIN, A.V.

DENISOV, Pavel Konstantinovich; VORONIN, A.V., otvetstvennyy red.; KLYAUS,  
Ye.M., red.izd-va; RYLINA, Yu.V., tekhn.red.

[Use of alternating current of industrial frequency for electrification  
of railroads in the U.S.S.R.] Primenenie peremennogo toka promyshlen-  
noi chasoty dlia elektrifikatsii zheleznykh dorog SSSR. Moskva,  
Izd-vo Akad.nauk SSSR, 1958. 76 p. (MIRA 11:6)  
(Railroads—Electrification)  
(Electric currents, Alternating)

VORONIN, Aleksey Vladimirovich; SIDOROV, N.I., inzh., red.; KHITROV, P.A.,  
tehn. red.

[Power supply for electric railroads] Energosnabzhenie elektri-  
cheskikh zheleznykh dorog. Izd.2., dop i ispr. Moskva, Gos.  
transp. zhel-dor. izd-vo, 1958. 408 p. (MIRA 11:10)  
(Electric railroads)

VORONIN, A.V.

Electric power supply for electrified railroads. Elek. i tepl. tiaga  
(MIRA 11:11)  
2 no.10:31-35 O '58.

1. Zaveduyushchiy laboratoriya Istituta kompleksnykh transportnykh  
problem AN SSSR.  
(Electric power distribution) (Electric railroads)

VORONIN, A.V.; TOPCHISHVILI, I.A.

Book about a prospective new system of electric traction ("Using industrial-frequency single-phase current for railroad electrification" by A.S. Avatkov. Reviewed by A.V. Voronin, I.A. Topchishvili). Elek. i tepl.tiaga 2 no.12:3 of cover D '58. (MIRA 12:1)

1. Zaveduyushchiy laboratoriyy instituta kompleksnykh transportnykh problem Ak SSSR (for Voronin). 2. Glavnyy inzh. sluzhby elektrifikatsii i energeticheskogo khozyaystva Zakavkanskoy dorogi (for Topchishvili).  
(Railroads--Electrification) (Avatkov, A.S.)

VORONIN, A.V.

887/109

NAME & RANK INFORMATION  
Vorontsov, Anatoly Yakovlevich - Captain 2nd class  
Vorontsov, Anatoly Yakovlevich (New Name in Military Literature) Moscow,  
Russia v. Vsesoyuznii nauchno-tekhnicheskii tsentr po radioelektronike i radioelektronike,  
Moscow, 1959. 222 p. (part of "Tsel' Sredy," vyp. 1.) Printed only inserted.  
5,000 copies printed.

ADDITIONAL INFORMATION  
Additional Information  
Soviet Military, Soviet Warplane, Soviet Standard No. 1.  
Soviet Military pilot.  
Soviet Military pilot.

Mr. (First Name): G.I. Larjev, Doctor of Technical Sciences, Professor 1st.  
(Last Name): I.O. Prokof'yev, Tech. Ed.; 27. Novosibirsk, Russia  
Liberator of Machine Building and Instrument Construction, 57. Novosibirsk,  
Russia.

PURPOSE: Data collection of articles is intended for the technical personnel of  
military-industrial plants, design and construction bureaus, and scientific research  
organizations involved in machine building. It may also be useful to the defense  
and aviation industry in manufacturing ordnance and vehicles.  
COMMITTEE: Data is the first number of "The Proceedings of the All-Soviet  
Union Scientific and Experimental Council of Machine Building" (formerly  
Machine Building Research Institute for Standardization of new constructions  
in 1966-57). Subjects covered include investigation of new general machine  
building methods in manufacturing machine parts for general machine  
building, reliable machinery, textile, aero and other machines. The com-  
mittee's recommendations are preparatory documents for machine  
parts in the form of drawings, descriptions, recommendations, tables, etc.  
The committee also includes the following methods: temperature and vibration  
testing of parts, reliability, load and usage and other methods. Parts  
from parts manufacturers and design bureaus are considered.  
The theory of determination of modes for service machines are discussed  
and the theory of determination of modes with large errors is presented.  
No personalities are mentioned. References concerning such article

Report, I.B., Radioparts and I.D. Sapozhnikov, Engineers  
in the NPO, and Flavio Machin for Machine Shop 1000

Bogomol', G.I., Candidate of Technical Sciences, and  
T.P. Shilovskaya, Radiotekhnika, Preparative Techniques in the  
Production of Slides for Optic Slides  
Technique of Operating Thermal Power Plants

Shestopalov, B.I., Candidate of Technical Sciences,  
Professor, 2-3rd Candidate of Technical Sciences,  
Chairman of Scientific Councils of Central Scientific  
Research Institutes of Nuclear Physics for Central Scientific

Central, M.V. Radchenko, Engineer in Glass Factory, Parts  
from Glass Factory

Smirnov, D.F., and V.I. Tikhonov, Engineers, Automatic Machines  
for Preparation of Plastic Products

Fedorov, B.B., Candidate of Technical Sciences, Professor  
Chairman of All-Union Panel and Sheet Panels  
Scientific Councils

Aleksandrov, V.M., Candidate of Technical Sciences, and G. V. Vysotskiy  
Professor, on Preparation of Construction materials, Glazkov

VORONIN, A.V.; DEMISOV, P.K.

Effectiveness of the use of alternating current of commercial frequency for traction purposes. Vop.elek.zhel.dor. no.1:5-30  
'59. (MIRA 12:8)  
(Electric railroads)

VORONIN, A.V.

Economic calculations in the design of an electric traction contact network and special characteristics for making them for a.c. and d.c. traction. Vop.elek.zhel.dor. no.1:75-88  
'59. (MIRA 12:8)  
(Electric railroads)

L 22.63-66 EWT(d)/EWP(h)/EWP(l)

ACC NR: AP6013603

SOURCE CODE: UR/105/65/010/010/0001/0007

AUTHOR: Voronin, A. V. (Candidate of technical sciences; Moscow)

ORG: none

TITLE: Technical and economic effectiveness of electrification of railroad transport and prospects for its development

SOURCE: Elektrichestvo, no. 10, 1965, 1-7

TOPIC TAGS: railway transportation, economics, electric power production

ABSTRACT: Electrification of railroad transport is considered by the Soviets to be a component part of electrification of the country. In the past few years, a transition has been made to use of ac at commercial frequency and 25 kv; the new ac system has been introduced on 6,200 km of railroad. Soon, electric and diesel engines will completely replace steam. The article states that calculations have shown it to be technically possible and economically justifiable to increase freight train speeds by 30% with the transition from diesel to electric power. This will result in a reduction in capital investments in rolling stock and a consequent savings. Calculations of the economic effectiveness presented, using the optimal variants of all tested types of transport power, show that: in the conditions of replacement of diesel power with electric, electrification is very effective and should

UIC: 421.311:03.1

Card 1/2

L 22,63-66

ACC NR: AP6013603

be expanded; the correct calculation of economic effectiveness of electrification  
of the railroads requires that yearly changes in capital investments and usage  
costs be considered, especially the costs connected with construction of dual-  
track lines. Orig. art. has: 4 figures, 6 formulas, and 5 tables. [JPRS]

SUB CODE: 13, 05, 09 / SUBM DATE: 16Jun65 / ORIG REF: C03

Card 2/2 BK

VEKSER, N.A.; VERESHCHAGA, Ye.A.; KOTENKO, A.I.; Prinimal uchastiye:  
VORONIN, A.V.

Effect of additional alloying and heat treatment on the  
physicomechanical properties of wheel steel. Sbor. trud.  
UNIIM no.11:334-343 '65.

(MIRA 18:11)

VORONIN, A.V., kand. tekhn. nauk, otv. red.; ZAKHAROVA, T.A., red.

[Technical and economic problems of developing transportation; transactions of the conference of young specialists]  
Tekhniko-ekonomiceskie voprosy razvitiia transporta;  
trudy konferentsii molodykh spetsialistov. Moskva, In-t  
kompleksnykh transportnykh problem. No.6. 1964. 195 p.  
(MIRA 18:4)

VORONIN, Aleksey Vladimirovich; KUCHKE, E.A., inzh., red.

[Electric power supply of electric railroads] Elektro-  
snabzhenie elektrifitsirovannykh zheleznykh dorog. Iid.3.,  
dop. i perer. Moskva, Transport, 1965. 306 p.  
(MIKA 1884)

VORONIN, A.V., kand. tekhn. nauk

Determining the efficiency of electric traction taking over-all electrification into account. Zhel. dor. transp. 45 no.6:  
29-33 Je '63. (MIRA 16:7)

(Electric locomotives)

CHEBOTAREV, Yevgeniy Viktorovich; HELYAKOV, I.A., kand. tekhn. nauk, retsenzent; VORONIN, A.V., kand. tekhn. nauk, retsenzent; RYVKIN, Yu.Ye., kand. tekhn. nauk, dots., red.; FRIDKIN, L.M., tekhn. red.

[Principles of electric traction] Osnovy elektricheskoi tiagi. Moskva, Gosenergoizdat. Pt.2. [Theory of operation, methods for design, and choice of the parameters of the principal elements of electric-power supply systems of electric railroads] Teoriia raboty, metody rascheta i vybor parametrov novnykh elementov sistemy elektrosnabzheniya elektricheskikh dorog. 1963. 183 p.  
(Electric railroads)

VORONIN, A.V., kand.tekhn.nauk (Moskva)

Methodology for determining the economic efficiency of hydroelectric power stations. Elektrичество no.12:80-82 D 62. (MIRA 15s12)  
(Hydroelectric power stations)

VORONIN, A.V., kand.tekn.nauk (Moskva)

Consideration of equipment life in economic and efficiency  
calculations in power engineering. Elektrichestvo no.3:84-85  
Mr '62. (MIRA 15:2)

(Power engineering--Accounting)

VORONIN, A.V.; VYSOTSKIY, A.I.; RUMYANTSEV, I.I.

Choice of transformer circuits for a.c. traction substations. Elek.  
zhel.dor. no.3;7-88 '61. (MIRA 14:7)  
(Electric transformers) (Electric railroads--Current supply)

VORONIN, A.V., kand.tekhn.nauk (Moskva)

Certain problems concerning the methodology of engineering efficiency  
calculations in power engineering. Elektrичество no.9:63-66  
(MIRA 14:9)  
S '61.

(Power engineering)

VORONIN, A.V.; ZHAVORONKOV, I.Ya.

Selection of the best voltage for a.c. traction systems.  
Elektrichestvo no.4:1-5 Ap '61. (MIRA 14:8)

1. Gosudarstvennyy nauchno-tehnicheskiy komitet Soveta  
Ministrov SSSR.  
(Electric railroads—Current supply)

VORONIN, A.V.; LEVINA, V.N.; KHARITONOV, N.V.

Problem of selecting the parameters of electric power supply  
systems for electric traction. Elek. zhel dcr. no. 2:6-27  
'60. (MIRA 14:2)  
(Electric railroads--Current supply)

SEARCHED, INDEXED  
SERIALIZED, FILED

Concerning methods for determining the average values of computational magnitudes by electrical calculation of traction networks. U.S.P. Pat. No. 2,233,239 '60. (L.H.E. 14:1)  
(Electric railroads--Current supply)

VORONIN, A. V., Cand Tech Sci -- (diss) "Research into the arrangement and securing of half-finished parts of the type of running bodies with unprocessed surfaces." Moscow, 1960. 16 pp with chart; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Automechanics Inst); number of copies not given; price not given; (KL, 22-60, 136)

ABEL', V.V., kand.tekhn.nauk; VORONIN, A.V., inzh.

Deformation of rings with a great curvature. Trudy VNIIMASH  
no.1:197-211 '59.  
(MIRA 13:5)  
(Déformations (Mechanics))

ACCESSION NR: AP4011534

S/0170/64/000/001/0028/0036

AUTHOR: Tsirlin, A. M.; Sakhiev, A. S.; Voronin, B. D.; Khodov, G. Ya.

TITLE: Study of heat transfer between the wall of a packed tube and a gas at elevated temperatures .

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 1, 1964, 28-36

TOPIC TAGS: electric gas heater, gas heater, heat transfer, packed tube, convective heat transfer, radiant heat transfer

ABSTRACT: A new type of electric gas heater (see enclosure) is used to investigate the heat transfer coefficient between the wall of a packed tube and hydrogen or nitrogen under temperatures conditions not previously studied, when there is appreciable radiant heat transfer. The tubes tested were 70- and 250-mm in diameter filled with molybdenum-tin spirals 0.1-mm thick, 4-mm in diameter, and 6-mm long. The details of the gas-heater are given. The gas test temperature ranged from 270 to 750 C, that of the pipe from 700 to 1100 c, and the Reynolds numbers ranged from 11.3 to 323. Curves are plotted for the experimental data and are generalized in two formulas in terms of Nusselt numbers. Results are compared with those obtained at low temperatures and are reduced to general equations which hold for a wide range

Card 1/32

ACCESSION NR: AP4011534

of temperatures and a variety of geometrical pipe shapes. It is shown that packing increases heat transfer at high temperatures by factors of 20 to 150. The packing serves only to spoil the gas flow and thereby intensify convective heat transfer. Orig. art. has 4 figures and 13 formulas.

ASSOCIATION: none

SUBMITTED: 20Mar63

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: IE, SD, AI

NO KEP Sov: 010

OTHER: 001

Card 2/3 2

TSIRLIN, A.M.; VORONIN, B.D.; KHODOV, G.Ya.

Hydraulic resistance in a high-temperature gas flow in tubes with  
irregularly shaped packing. Inzh.-fiz. zhur. 7 no.8:103-107 Ag '64.  
(MIRA 17:10)

TSIRLIN, A.M.; SAKHIYEV, A.S.; VORONIN, B.D.; KHODOV, G.Ya.

Heat transfer between the wall of a packed tube and a gas at elevated temperatures. Inzh.-fiz. zhur. 7 no.1:28-36 Ja '64. (MIRA 17:2)

S/193/62/000/010/003/007  
AC04/A101

AUTHORS: Tsirlin, A. M., Voronin, B. D., Khodov, G. Ya.

TITLE: Shaft-type resistance furnace for hydrogen heating

PERIODICAL: Byulleten' tekhniko-ekonomiceskoy informatsii, no. 10, 1962,  
28 - 30

TEXT: The new furnace for heating hydrogen up to 1,473 - 2,073°K has been developed by an organization of the Gosudarstvennyy komitet po khimii pri Sovete Ministrov SSSR (State Committee of Chemistry at the Council of Ministers USSR). The tubular graphite heater of the furnace consists of a screen and electrode connected in series to the electric network through a graphite connector. The applied technology of covering the graphite by a solid layer of silicon carbide was developed by the Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Sintered Carbides) VNIITS. The authors give a detailed description of the furnace design and operation and point out that the heating element is completely relieved of the gas pressure. During operation the gas temperature at the furnace inlet and outlet and the

Card 1/2

Shaft-type resistance furnace for hydrogen heating

S/193/62/C00/C10/003/007  
A004/A101

temperature of the heating element are measured by means of TsNiIichermet-1 tungsten-molybdenum thermocouples. The following technical data are given: voltage 10 + 40 v; power - up to 475 kw; hydrogen consumption - up to 900 nm<sup>3</sup>/hour; working pressure - up to 6 atm; electrode service life - up to 800 hours; efficiency - up to 78%; working zone dimensions: diameter - 255 mm, length - 3,285 mm; heating element temperature - up to 2,473°K; temperature of the working gas during long-time operation - 1,673 + 1,873°K. The new furnace differs from the present designs in that a combined graphite-molybdenum heater is used which ensures high temperatures, a large heat-exchange area and a satisfactory durability in respect to the gas being heated. There is 1 figure.

Card 2/2

L 2408-66

ACC NR: AP6010030	SOURCE CODE: UR/0170/66/010/003/0287/0293
AUTHOR: Voronin, B. D.; Tsirlin, A. M.; Smelyanskiy, M. Ya.	03 3
ORG: none	
TITLE: Calculation of gas-dynamic factors in designing electric arc heaters with a vortex gas-stabilization arc.	
SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 3, 1966, 287-293	
TOPIC TAGS: gas dynamics, electric arc, gas flow, electric property, heat radiation, vortex flow, thermal stability	
ABSTRACT: Experiments have been carried out on stabilization of an arc by a vortex gas flow in an electric hydrogen heater. Boundaries of stable operation of the apparatus were found. Investigations of gas dynamics reveal an explicit similarity between the dependence of the limiting current and the tangential velocity in the electrode channel on the gas flow rate. The quantitative relation was found experimentally between the controlling parameters of the heater to express the gas-dynamic conditions of the arc stabilization at the boundary of the steady operation region. Many equations are presented for the calculation of electrical parameters and characteristic dimensions (the anode diameter) which provide a good stabilization of the arc.	
Card 1/2	UDC: 533.6

L 23018-66

ACC NR: AP6010030

the arc and the required heat generation for a particular type of electrical heater. Orig. art. has: 4 figures, 8 formulas, and 1 table.  
[Based on author's abstract] [BT]

SUB CODE: 20/

SUBM DATE: 01Jun65/ ORIG REF: 005/  
OTH REF: 001/

Card 2/2 xla

ACC NR: AP7004634

SOURCE CODE: UR/0288/66/000/003/0057/0065

AUTHOR: Voronin, B. D.; Tsirlin, A. M.; Smelyanskiy, M. Ya.

ORG: none

TITLE: Method for determining the operating parameters and the basic geometrical dimensions of vortex-stabilized electric-arc generators

SOURCE: AN SSSR. | Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1966, 57-65

TOPIC TAGS: plasma generator, plasma heating, plasma arc, electric arc, plasma jet, arc discharge

ABSTRACT: A method is developed for calculating the basic working parameters of vortex-stabilized electric-arc plasma generators used as plasma jet sources, as high-temperature gas heaters, and as chemical reactors. In particular, expressions are derived for determining the volt-ampere characteristic and the characteristic geometrical diameter of the anode of such generators. In addition, the effects of current, gas discharge, and geometrical dimensions on the conditions of arc stabilization are considered. It is shown that the length of the anode, which is determined by the length of the arc discharge in its channel, has an appreciable effect on thermal characteristics of the generators. Other geometrical parameters, such as the diameter and length of both the vortex chamber and cathode, the number and cross-sectional area of inlet nozzles, and the spacing between the electrodes, do not

Card 1/2

UDC: 621.373.3

ACC NR: AP7004634

necessarily affect the basic characteristics of the generators and arc stabilization conditons. The derived expressions were used in designing a 1000-kw electric arc hydrogen heater. Orig. art. has: 6 figures and 14 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 001

Card 2/2

VORONIN, B.G.

Agricultural machinery construction in foreign countries. Sel'-  
khozmashina no.10:29-30 0'55.  
(MLRA 8:12)  
(Agricultural machinery)

SHATUNOVSKIY, Grigoriy Mikhaylovich, kand.tekhn.nauk; KORCHAGIN, P.A.,  
inzh., retsenzent; VORONIN, B.G., inzh., red.; IVENSKAYA, N.D.,  
red.izd-va; CHERNOVA, Z.I., tekhn.red.

[Engineering efficiency of the structures of agricultural  
machinery] Tekhnologichnost' konstruktsii sel'skokhoziaistvennykh  
mashin. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry,  
1960. 367 p.  
(Agricultural machinery)

VORONIN, BORIS GRIGOR'YEVICH obituary - TRAKT. i sel'skhozmash  
(1902? - 1963) vol. 33 no. 5 p. 3 of cover  
May '63.

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.; EYDENZON, V.Ya.;  
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